

Remote Sensing of Environment

An Interdisciplinary Journal

VOLUME 69, NUMBER 1, JULY 1999

Contents

- Wenge Ni, Curtis E. Woodcock, and David L. B. Jupp
Variance in Bidirectional Reflectance over Discontinuous Plant Canopies 1
- Jarkko Koskinen, Sari Metsämäki, Jochen Grandell, Sami Jänne, Leena Matikainen, and Martti Hallikainen
Snow Monitoring Using Radar and Optical Satellite Data 16
- Jing M. Chen
Spatial Scaling of a Remotely Sensed Surface Parameter by Contexture 30
- N. P. Nezlin, A. G. Kostianoy, and M. Gregoire
Patterns of Seasonal and Interannual Changes of Surface Chlorophyll Concentration in the Black Sea Revealed from the Remote Sensed Data 43
- Ted A. Scambos, Geir Kvaran, and Mark A. Fahnestock
Improving AVHRR Resolution Through Data Cumulation for Mapping Polar Ice Sheets 56
- Arnon Karnieli, Giora J. Kidron, Cornelia Glaesser, and Eyal Ben-Dor
Spectral Characteristics of Cyanobacteria Soil Crust in Semiarid Environments 67
- I. J. Barton and A. J. Prata
Difficulties Associated with the Application of Covariance-Variance Techniques to Retrieval of Atmospheric Water Vapor from Satellite Imagery 76
- C. Ottlé and C. François
Further Insights into the Use of the Split-Window Covariance Technique for Precipitable Water Retrieval 84

VOLUME 69, NUMBER 2, AUGUST 1999

Contents

- Gerald G. Schaber and Carol S. Breed
The Importance of SAR Wavelength in Penetrating Blow Sand in Northern Arizona 87
- Fraser Gemmell
Estimating Conifer Forest Cover with Thematic Mapper Data Using Reflectance Model Inversion and Two Spectral Indices in a Site with Variable Background Characteristics 105
- Zhao-Liang Li, F. Becker, M. P. Stoll, and Zhengming Wan
Please see *Remote Sens. Environ.* 69:197-214 122

<i>Dale L. Schuler, Jong-Sen Lee, and Thomas L. Ainsworth</i> Compensation of Terrain Azimuthal Slope Effects in Geophysical Parameter Studies Using Polarimetric SAR Data	139
<i>Volker C. Radeloff, David J. Mladenoff, and Mark S. Boyce</i> Detecting Jack Pine Budworm Defoliation Using Spectral Mixture Analysis: Separating Effects from Determinants	156
<i>F. Morales, R. Belkhotja, Y. Goulas, J. Abadía, and I. Moya</i> Remote and Near-Contact Chlorophyll Fluorescence during Photosynthetic Induction in Iron-Deficient Sugar Beet Leaves	170
<i>J.-P. Wigneron, P. Ferrazzoli, A. Oliso, P. Bertuzzi, and A. Chanzy</i> A Simple Approach To Monitor Crop Biomass from C-Band Data	179
<i>Hiroshi Okayama and Li-Zhong Wang</i> Spatial Coherence Degradation of Light Influenced by Temperature and Aerosol by Use of Atmospheric Turbulence Chamber	189
<i>John R. Dymond and James D. Shepherd</i> Comment on "Topographic Normalization of Landsat TM Images of Forest Based on Subpixel Sun-Canopy-Sensor Geometry," by Gu and Gillespie (<i>Remote Sens. Environ.</i> 64:166-175, 1998)	194
<i>Degui Gu and Alan Gillespie</i> Response to Dymond and Shepherd's Comment on "Topographic Normalization of Landsat TM Images of Forest Based on Subpixel Sun-Canopy-Sensor Geometry" (<i>Remote Sens. Environ.</i> 64:166-175, 1998)	195

VOLUME 69, NUMBER 3, SEPTEMBER 1999

Contents

<i>Zhao-Liang Li, F. Becker, M. P. Stoll, and Zhengming Wan</i> Evaluation of Six Methods for Extracting Relative Emissivity Spectra from Thermal Infrared Images	197
<i>Narayanan Subhash, Oliver Wenzel, and Hartmut K. Lichtenthaler</i> Changes in Blue-Green and Chlorophyll Fluorescence Emission and Fluorescence Ratios during Senescence of Tobacco Plants	215
<i>E. Boegh, H. Soegaard, N. Hanan, P. Kabat, and L. Lesch</i> A Remote Sensing Study of the NDVI-T_s Relationship and the Transpiration from Sparse Vegetation in the Sahel Based on High-Resolution Satellite Data	224
<i>Joan E. Luther and Allan L. Carroll</i> Development of an Index of Balsam Fir Vigor by Foliar Spectral Reflectance	241
<i>Paulo Marinho Barbosa, Jean-Marie Grégoire, and José Miguel Cardoso Pereira</i> An Algorithm for Extracting Burned Areas from Time Series of AVHRR GAC Data Applied at a Continental Scale	253
<i>Wim J. D. van Leeuwen, Alfredo R. Huete, and Trevor W. Laing</i> MODIS Vegetation Index Compositing Approach: A Prototype with AVHRR Data	264

St. Sandmeier and D. W. Deering

**Structure Analysis and Classification of Boreal Forests Using Airborne Hyperspectral
BRDF Data from ASAS**

281

Short Communication

Anatoly A. Gitelson, Claus Buschmann, and Hartmut K. Lichtenthaler

**The Chlorophyll Fluorescence Ratio F_{735}/F_{700} as an Accurate Measure of the Chlorophyll
Content in Plants**

296

Volume Contents